

INSWOOL[®]-HP BLANKET

Classification: 2300°F Alumina-Silica Ceramic Fiber Blanket

	<u>English Units</u>	<u>SI Units</u>	
Maximum Recommended Temperature			
For Intermittent Use	2300°F	1260°C	
For Continuous Use	2150°F	1177°C	
Color		White	
Fiber Diameter		3 Microns	
Fiber Length	3 in. avg.	7.6 cm. avg.	
Tensile Strength 8 lb/ft ³ (0.13 g/cm ³) Blanket	<u>lb/in²</u>	<u>MPa</u>	
Machine Direction	10	0.07	
Cross Direction	6	0.04	
Permanent Linear Change			
Contraction or Expansion			
Heated for 24 hrs. at 2000°F (1093°C)		-2.2%	
Heated for 24 hrs. at 2200°F (1204°C)		-3.0%	
Heated for 24 hrs. at 2400°F (1315°C)		-4.0%	
Thermal Conductivity At Mean Temperature	<u>4 lb/ft³</u>	<u>6 lb/ft³</u>	<u>8 lb/ft³</u>
Btu-in/hr-ft ² ·°F (W/m·°C)	(.06 g/cm ³)	(.10 g/cm ³)	(.13 g/cm ³)
600°F (316°C)	0.6 (.08)	0.5 (.07)	0.4 (.06)
1000°F (538°C)	1.16 (.17)	1.0 (.14)	0.8 (.11)
1400°F (760°C)	1.8 (.26)	1.55 (.22)	1.2 (.17)
1600°F (871°C)	2.2 (.31)	1.85 (.26)	1.4 (.20)

Chemical Analysis: (Approximate)
 (Calcined Basis)

Silica	(SiO ₂)	54.3%
Alumina	(Al ₂ O ₃)	45.0%
Iron Oxide	(Fe ₂ O ₃)	0.2%
Lime	(CaO)	0.1%
Magnesia	(MgO)	0.1%
Titania	(TiO ₂)	0.1%
Alkalies	(Na ₂ O+K ₂ O)	0.2%

(Continued)

Technical Data

INSWOOL[®]-HP BLANKET (Continued)

INSWOOL-HP BLANKET is a low iron, high purity ceramic fiber blanket developed especially for use in highly reducing atmospheres. It is lightweight, flexible, and suitable for operating temperatures to 2300°F. INSWOOL-HP BLANKET retains a soft fibrous structure right up to its maximum usage temperature, and even the most extreme temperature changes will not affect its ability to insulate and stay in place.

INSWOOL-HP BLANKET was developed to meet the demand for a high temperature, flexible blanket insulation with a low iron content of less than 1%. INSWOOL-HP BLANKET has excellent strength, both hot and cold. It remains in place on the furnace anchors even at high temperatures and can resist damage even when subjected to normal mistreatment in shipment and handling. If INSWOOL-HP BLANKET becomes wet from water, steam, or oil, its thermal and physical properties are restored upon drying. Its sound absorption ability is greater than dense or insulating refractories and it stores some 95% less heat than dense firebrick and about 75% less than insulating brick.

The test data shown are based on average results on production samples and are subject to normal variation on individual tests. Accordingly, test data cannot be taken as establishing maximum or minimum specifications.

1/29/04 Dev.